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AMENDMENTS TO THE CLAIMS:

- (Currently amended) A method of forming a semiconductor structure, comprising:
 providing a nitride layer between a silicon-containing layer and a polysilicon layer,
 <u>wherein said silicon-containing layer comprises a grain size substantially within a nano-scale size.</u>
- (Original) The method of claim 1, further comprising:
 forming an amorphous silicon layer, to provide said silicon-containing layer.
- (Original) The method of claim 1, further comprising:
 forming a polysilicon layer, to provide said silicon-containing layer.
- (Original) The method of claim 1, further comprising:
 forming a SiGe layer, to provide said silicon-containing layer.
- 5. (Original) The method of claim 1, wherein a grain size of said silicon-containing layer is smaller than that of said polysilicon layer.
- 6. (Original) The method of claim 1, wherein said silicon-containing layer is formed below said polysilicon layer.

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7. (Original) The method of claim 1, wherein said nitride layer comprises a silicon nitride layer.

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8. (Currently amended) The method of claim 1, wherein said semiconductor structure comprises a gate stack, and

wherein a grain size of said silicon-containing layer is smaller than that of said polysilicon layer.

- 9. (Original) The method of claim 1, wherein said nitride layer is formed on a surface of said silicon-containing layer and said polysilicon layer is formed on a surface of said nitride layer.
- 10. (Original) The method of claim 1, wherein said silicon-containing layer has a grain size substantially within a range of about 10 nm to about 20 nm.
- 11. (Original) The method of claim 5, wherein said grain size of said silicon-containing layer is substantially within a range of about 10 nm to about 20 nm.
- 12. (Original) The method of claim 1, further comprising: depositing one of an amorphous Si, a polysilicon, and poly-SiGe as said siliconcontaining layer.

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- 13. (Original) The method of claim 12, wherein said one of the amorphous silicon, the polysilicon, and the poly-SiGe has a thickness of about 10 nm to about 20 nm.
- 14. (Original) The method of claim 1, wherein said nitride layer has a thickness within a range of about 5 Å to about 15 Å.
- 15. (Currently amended) The method of claim 1, further comprising: forming said silicon-containing layer on a gate dielectric, said gate dielectric being formed on a substrate, wherein a grain size of said silicon-containing layer is smaller than that of said polysilicon layer.
- 16. (Original) The method of claim 15, wherein said substrate comprises any of a bulk silicon substrate, a silicon-on-insulator, and a SiGe substrate.
- 17. (Original) The method of claim 15, wherein said gate dielectric has a thickness within a range of about 9 Å to about 50 Å.
- 18. (Original) The method of claim 15, wherein said gate dielectric comprises any of an oxide, an oxynitride, and an oxide-nitride stack combination.
- 19. (Original) The method of claim 2, wherein said amorphous Si is deposited at a temperature below 550 °C.

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- 20. (Original) The method of claim 3, wherein said polysilicon is deposited at a temperature below 550 °C.
- 21. (Original) The method of claim 12, wherein said nitride layer is formed by a furnace anneal on said one of the amorphous silicon, the polysilicon, and the poly-SiGe.
- 22. (Original) The method of claim 21, wherein said nitride layer is formed by said furnace anneal at a temperature within a range of about 550 °C to about 750 °C.
- 23. (Original) The method of claim 21, wherein said nitride layer is formed by said furnace anneal in an ammonia ambient.
- 24. (Original) The method of claim 22, wherein said nitride layer is formed by said furnace anneal for about 5 minutes to about 20 minutes.
- 25. (Original) The method of claim 24, wherein said nitride layer is formed by said furnace anneal for about 15 minutes.
- 26. (Original) The method of claim 1, wherein said polysilicon layer has a thickness within a range of about 80 nm to about 130 nm.
- 27. (Currently amended) A method of making a semiconductor structure, comprising:

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forming a gate stack including a silicon-containing layer and a polysilicon layer with a nitride layer therebetween,

wherein a grain size of the silicon-containing layer is set without affecting a sets the polysilicon grain size of the polysilicon layer.

28. (Original) A method of forming a gate stack, comprising:

providing a nitride layer between a silicon-containing layer and a polysilicon layer, wherein said silicon-containing layer has a grain size substantially within a range of about 10 nm to about 20 nm.

29. (Currently amended) A semiconductor structure, comprising:

a first polysilicon layer; a second polysilicon layer formed over said polysilicon layer; and a nitride layer formed between said first and second polysilicon layers,

wherein a grain size of said first polysilicon layer is smaller than that of said second polysilicon layer, and

wherein said grain size of said first polysilicon layer comprises a grain size substantially within a nano-scale size.

- 30. (Original) The structure of claim 29, wherein said first polysilicon layer has a grain size substantially within a range of about 10 nm to about 20 nm.
- 31. (Original) The structure of claim 29, wherein said nitride layer has a thickness within a range of about 5 Å to about 15 Å.

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- 32. (Original) The structure of claim 29, further comprising:
- a gate dielectric on which said first polysilicon layer is formed; and a substrate on which said gate dielectric is formed.
- 33. (Original) The structure of claim 32, wherein said substrate comprises any of a bulk silicon substrate, a silicon-on-insulator, and a SiGe substrate.
- 34. (Original) The structure of claim 32, wherein said gate dielectric has a thickness within a range of about 9 Å to about 50 Å.
- 35. (Original) The structure of claim 32, wherein said gate dielectric comprises any of an oxide, an oxynitride, and an oxide-nitride stack combination.
- 36. (Original) The apparatus of claim 29, wherein said second polysilicon layer has a thickness within a range of about 80 nm to about 130 nm.
- 37. (Original) A gate stack, comprising:
- a first polysilicon layer; a second polysilicon layer; and a nitride layer formed between said first and second polysilicon layers, wherein said first polysilicon layer has a grain size substantially within a range of about 10 nm to about 20 nm.